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LDWSF 12.3.54
07/10/00

Supplemental Application for Discharge of Contaminated Stormwater

This form shall be completed along with a King County Wastewater Discharge Permit Application. You may attach additional information as necessary.

Company Name: Glacier Northwest, Inc.

Site Address: 5975 East Marginal Way S.
Seattle, WA 98134

Activities leading to unavoidable contamination of stormwater:

Production of ready mixed concrete.

Square footage of area proposed to drain to sanitary sewer: The entire site is 5.1 acres (222,156 square feet). However, the site only discharges to the sanitary sewer in the limited periods when the stormwater is present in amounts above the capacity of the treatment system for discharging to surface water.

Description of methods to prevent contamination of stormwater:

See the attached stormwater pollution prevention plan.

Description of site modifications made so that stormwater remains uncontaminated and therefore may be routed to the storm-drain system. Modifications may be to such areas as roofs (drains), parking lots, or outdoor storage. Stormwater from the roof of the site's office building and truck shop is directed to the local storm drain system (see the attached map.)

Description of any stormwater flow controls, such as pumps or tanks, that restrict or retain the flow of stormwater to the sanitary sewer. Include the discharge rate in gallons per minute or cubic feet per second. Up to 60,000 gallons per day of contaminated stormwater is collected and discharged from a large holding tank to the sanitary sewer. The discharge is controlled by a valve. The water drains through a 4" line and the tank empties in about 1.25 hours (rate of 800 gallons/minute).

Is there a wastewater meter? If so, describe the meter type and number.

The flow is measured by an electrical wastewater meter (Sparling Model RR767-110-1)

(For office use only)

Component Agency

Sq. Ft. Check

Minimization

BMPs

STORMWATER POLLUTION PREVENTION PLAN
GLACIER NORTHWEST, INC.
5975 East Marginal Way
Seattle, WA 98134

PERMIT WAG-50-3191

Glacier Northwest, Inc. (Glacier) operates a ready-mixed concrete batch plant on property owned in Seattle, Washington (East Marginal Way facility). In addition, the facility houses the company headquarters, a building materials supplies warehouse, a vehicle maintenance shop, and various other structures that support the operations.

The NPDES/stormwater discharge permit issued by the Department of Ecology (General Permit) requires Glacier to prepare a Stormwater Pollution Prevention Plan (SWPPP) to minimize the possibility that stormwater that falls on the property could be contaminated by operations at the facility. Stormwater that falls on the East Marginal Way property is directed to concrete-lined ponds and processed as part of the water recycling program.

A complete copy of the General Permit and the Monitoring Plan is available from Darrell Herman, the plant superintendent, as well as the Washington Division environmental manager.

1. **Facility Layout**

A copy of a facility mapped is attached. The map identifies all areas of operation and the direction of stormwater flow. The entire yard is paved with concrete at least six inches thick. The only portion of the yard that could be considered pervious is a limited area where an existing railroad spur enters the property.

The General Permit identifies a number of activities as potential sources of stormwater contamination at *all* ready-mixed concrete facilities. Glacier has already addressed any potential contaminants from these activities and operations in the water recycling system. However, to satisfy the requirements of the General Permit, these activities and operations are described below:

> Bulk Materials Storage. There are five types of materials used in bulk at the East Marginal Way facility. (1) Aggregate is brought in by barge and stored by type in four enclosed silos. Aggregate is transferred from the barge to the silos by a conveyor system. This aggregate is not exposed to precipitation or stormwater flow. There are several specialty aggregates that are stored in open piles surrounded by concrete ecology blocks. Precipitation that falls on these aggregate stockpiles flows across the pavement toward one of the concrete-lined collection ponds that are part of the water recycling system. (2)

The concrete admixtures used in the batch process are stored in plastic carboys located in a covered containment area next to the batch plant. The number of admixture containers on-site varies but usually ranges between eight and twelve. Admixtures are pumped into the tanks by the product vendors. The admixtures are not exposed to precipitation or stormwater flow. (3) Cement and flyash are stored in five completely contained bulk storage (2,000-ton to 5,000-ton) silos in the northeast portion of the plant, and ten smaller (35-ton to 70-ton) silos that are part of the batch plants. Baghouses collect dust emitted from the silos during transfer from tanker trucks. (4) There are two fully permitted underground storage tanks used to fuel Glacier vehicles. The tanks are filled by the product vendor as needed. (5) Motor oil, hydraulic fluid, and waste oil are also stored in bulk. These tanks are stored in covered concrete containment next to the shop and are not exposed to precipitation or stormwater flow.

Any water generated from precipitation falling on these areas is directed to one of the concrete-lined collection ponds in the water recycling system. See the attached map for stormwater flow.

Outdoor Storage and Processing. A small quantity of specialty aggregate and aggregate reclaimed from the washwater separation system are the only materials stored outside and exposed to precipitation and stormwater. Aggregate is transferred from the barge into the storage piles using a conveyor belt. A front-end loader transfers aggregate from storage piles to another conveyor belt to feed the batch plant.

There are several other activities that occur outdoors. Mixed concrete is transferred into the trucks below the batch plant. Returned concrete is poured into forms to create ecology blocks. Truck washout water is transferred through a series of concrete-lined settling ponds before reuse or treatment and discharge. The filter cakes from the water recycle system are temporarily stored on-site prior to off-site disposal. The outside of trucks are rinsed off before leaving the facility to minimize fugitive emissions. These are the only operations that take place outdoors.

Water generated from these activities is directed to one of the concrete-lined collection ponds in the water recycling system. See the attached map for stormwater flow.

Air emissions. Air emissions are controlled in accordance with Puget Sound Clean Air Agency regulations. There are seven baghouses at the East Marginal Way facility: three on the bulk cement storage silos and four on the batch plant. Fugitive dust is controlled by spraying the yard with water as necessary and rinsing concrete trucks before they leave the property. Glacier also cleans the yard regularly with a wet sweeper vacuum truck. Any stormwater that falls on roofs is directed off of the roof and into the yard. Most of this water flows into the recycling system.

Waste treatment, storage or disposal. Filter cakes that are generated by the water recycling system are temporarily stored on-site prior to off-site disposal. There is no other on-site waste treatment, storage or disposal that is exposed to stormwater.

Vehicle maintenance. Glacier's vehicle fleet is maintained as described below in the section on Operational Best Management Practices to minimize the possibility of equipment failure and release of materials from the trucks. All vehicle maintenance involving hydraulic fluid, motor oil, antifreeze or any other potential pollutant occurs within the enclosed maintenance shop. There are no floor drains in the shop. The shop is equipped with a spill containment kit to ensure that any spill of material within the maintenance shop is contained within the building.

After tempering the load, drivers wash the exterior of concrete trucks to prevent cement dust or concrete from leaving the property. All washwater drains to a concrete-lined pond in the water recycling system. See attached map for direction of stormwater flow.

The inside of concrete trucks are washed out when they return to site. This is done on the wash rack adjacent to the concrete-lined collection pond. All process water is directed into the water recycling system.

Underground Storage. Glacier has one 10,000-gallon diesel and one 6,000-gallon gasoline underground storage tank (UST) on-site. The tanks are permitted with the Department of Ecology and meet all applicable federal, state, and local regulations.

2. Best Management Practices

Glacier is obligated to design and implement best management practices in order to reduce the potential discharge of pollutants to surface water or groundwater. As described in detail below, Glacier has already undertaken a number of innovative measures to control process and stormwater at this facility.

All process water and most of the stormwater at the site is contained in the water recycling system. When precipitation is high and the concrete market is slow, Glacier can not use all of the water in its processes. Excess water is either treated and discharged to the Duwamish Waterway or discharged to the Metro sewer system in accordance with a permit. Glacier uses operational and treatment best management practices (BMPs) to meet the following effluent discharge limits: pH (between 6.0 and 9.0), total suspended solids (40 mg/l) and turbidity (less than 50 NTU).

A. Operational Best Management Practices. Glacier Northwest is obligated to implement operational best management practices to minimize the discharge of water exceeding the effluent limits. Glacier has implemented the following operational best

management practices to minimize both the discharge of high pH process water as well as the collection of solids or other materials in the stormwater directed to the settling pond.

Pollution Prevention Team. Darrell Herman, the plant superintendent, has primary responsibility for implementation of and adherence to the Stormwater Pollution Prevention Plan and the terms of the General Permit, including monitoring and reporting. This responsibility also includes notifying the Environmental Manager of a change or incident that may affect the composition or discharge of process water or site stormwater. Darrell Herman and Ned Pettit will be responsible for making appropriate modifications to the SWPPP and Monitoring Plan. Kent Brovold, the yard foreman; Steve Blight, the batchperson, and Gary Beard, the shop foreman are all members of the SWPPP team responsible for notifying Darrell Herman or Ned Pettit of facility changes or other issues that affect process water or stormwater.

Darrell Herman	Office (206) 764-3025 Mobile (206) 786-8529 Pager (206) 608-7800
Walt Fromm	Mobile (206) 571-1094 Pager (206) 608-4826
Steve Blight	Office (206) 764-3045
Gary Beard	Office (206) 764-3105
Environmental Manager	Office (206) 768-7612 Mobile (206) 396-4888

Good Housekeeping and Preventative Maintenance Practices.

Concrete trucks are rinsed off before leaving the property to prevent tracking of cement. Glacier washes down the yard every day to minimize buildup of cement dust and particulates. Washwater is captured in the water recycle system. Glacier also cleans the yard regularly with a wet sweeper vacuum truck to control buildup of particulates.

Baghouses are inspected at least monthly and maintained to ensure effective emission control. Bags are replaced once a year as part of Glacier's preventative maintenance program.

Aboveground tanks and containers are inspected regularly to ensure that there is no sign of material release. Glacier personnel randomly monitor vendors' delivery of bulk substances to ensure that no material is released.

Spill Prevention and Emergency Cleanup Plan. Glacier has prepared spill prevention and emergency cleanup plan for the East Marginal Way facility. This plan is attached and incorporated by reference into Glacier's overall Stormwater Pollution Prevention Plan.

Employee Training. Employees are educated about the General Permit, the Monitoring Plan and the Stormwater Pollution Prevention Plan as part of the overall environmental education program being implemented by Glacier. Preventative maintenance, good housekeeping practices, spill prevention, and spill response are particularly emphasized. This training occurs once a year.

B. Source Control Best Management Practices.

The General Permit requires permit holders to implement source control best management practices to prevent pollution of stormwater discharged to surface water or ground. Glacier implements a variety of source control best management practices including underground fuel storage, containment of shop materials, and general good housekeeping measures designed to prevent release of materials into the water. This is combined with the treatment technologies described below to meet discharge effluent limits.

C. Treatment Best Management Practices.

Glacier Northwest is obligated to install and implement treatment best management practices to minimize the discharge of water exceeding effluent limits. As described above, Glacier made a number of capital improvements to control wastewater at the East Marginal Way facility. Glacier has paved and graded the facility to direct stormwater and process water into concrete-lined ponds. Water collected in the ponds is reused or treated to adjust the pH so that excess process water may be discharged directly to the Duwamish Waterway. Glacier also maintains a Metro discharge permit as backup to these two systems.

Currently there are two types of treatment BMPs designed and implemented at the East Marginal Way facility to meet permit effluent limits. First, truck washout water is directed through a screw to remove aggregate for reuse. This significantly reduces the

solids in the washout ponds. Second, Glacier has purchased a filter press designed to remove fine solids from the water. Finally, Glacier has designed and implemented a water treatment system to lower the pH so that excess process water may be discharged directly to the Duwamish Waterway.

D. Innovative Treatments.

Glacier has designed and invested in an innovative water reuse and water treatment system, described above.

3. **Stormwater Inspections**

The General Permit requires that all non-process stormwater be inspected at least twice annually to confirm that the Best Management Practices adopted are effective in preventing non-stormwater discharges in stormwater. Since all stormwater at the East Marginal Way facility is commingled and collected with process water, it is all treated as process water. Glacier is not obligated to evaluate stormwater for the presence of non-stormwater discharges. Personnel will conduct a dry season inspection to confirm that no process water leaves the site.

4. **Plan Update**

This Stormwater Pollution Prevention Plan will be updated if Glacier discovers that stormwater is not being contained in the water recycling system or if there are any changes in design or operation of the facility that affect stormwater discharges or the information in this plan.

5. **Recordkeeping**

Glacier Northwest maintains a current copy of the General Permit, Monitoring Plan and this Stormwater Pollution Prevention Plan with Darrell Herman, the plant superintendent. All monitoring results are retained for five years from the date of the sample. Copies of all information are also retained by the division Environmental Manager.

Certification

This facility was inspected and it appears that there are no non-stormwater discharges in stormwater that is discharged to groundwater or surface water from this site. In the event that additional stormwater discharges develop or are discovered, each will be evaluated to determine whether non-stormwater discharges are present in the stormwater. In the event that a stormwater discharge is discovered that is not in compliance with the effluent limits the event will be reported to Ecology in accordance with General Permit condition S.6.E.

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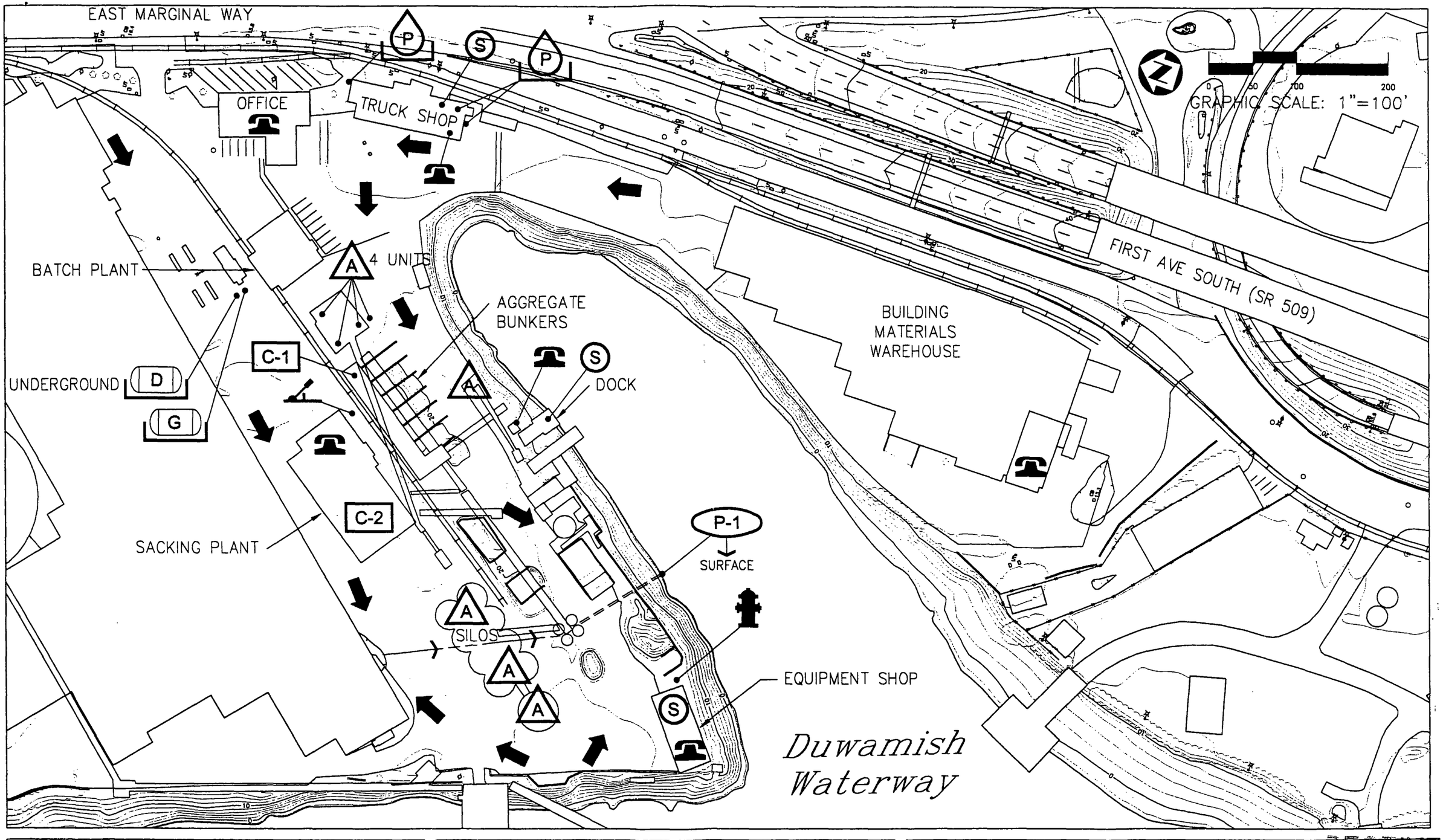
Name & Title Date

Last printed 08/09/00 5:03 PM



LONE STAR NORTHWEST, INC.

REV	DATE	BY	APP'D	DESCRIPTION
1	10/07/99	SFB		1999 ISSUE

LONE STAR NORTHWEST
DUWAMISH CONCRETE PLANT
PERMIT EXHIBIT

DATE OF MAPPING: 4-13-99	SCALE: 1"=100'	DWG No: